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REMARKS

Claims 2-8, 10 and 12 are pending in this application. By this amendment, Applicants amend claims 2-8 and 10 and cancel claim 1.

Claims 1-8, 10 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA) in view of Sano (U.S. 5,190,892). This rejection is respectfully traversed.

Claim 5 has been amended to recite:

"A method of producing a high frequency circuit chip having a substrate made of a ceramic with a high dielectric constant, a wiring pattern provided on one main surface of the substrate, an electric conductor layer provided on substantially all of another main surface of the substrate, and a through-hole including a connecting electrode for connecting the wiring pattern and the conductor layer to each other, the method comprising the steps of:

filling electrically conductive paste into a perforation in the substrate, and firing the paste to form the connecting electrode of the through-hole;

forming a resist pattern with an opening having a desired shape and size directly on the substrate;

forming a thin film with a wiring material directly on the substrate through the opening over the resist pattern after forming the resist pattern; and

removing the unnecessary wiring material thin film deposited on the resist pattern together with the resist pattern to form the wiring pattern directly on the substrate by a lift-off method;

mirror-polishing at least the surface of the fired substrate on which the wiring pattern is formed, and the fired substrate in which the through-hole having the connecting electrode is formed; and

thereafter forming the wiring pattern on the mirror-polished surface by the lift-off method." (Emphasis added)

Claim 10 recites features and method steps that are similar to the features and method steps recited in claim 5, including the emphasized method steps.

With the unique combination of features and method steps recited in claims 5 and 10, the resist is uniformly coated onto the smooth surface of the substrate, and the high precision resist pattern is securely formed thereon. Thus, a wiring pattern having a reduced line width and outstanding shape and size precisions is efficiently formed. In addition, the density of the wiring is greatly improved (see, for example, the paragraph

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bridging pages 4 and 5 of the specification, as originally filed).

The Examiner acknowledged that AAPA and Sano fails to teach or suggest the steps of "mirror-polishing at least the surface of the fired substrate on which the wiring pattern is formed, and the fired substrate in which the through-hole having the connecting electrode is formed," and "thereafter forming the wiring pattern on the mirror-polished surface by the lift-off method". However, the Examiner alleged that it would have been obvious "to mirror-polish at least the surface of the fired substrate on which the wiring pattern is formed, and the fired substrate in which the through-hole having the connecting electrode is formed of prior art's device in order to improve the accuracy of the wiring pattern." Applicants respectfully disagree.

The Examiner has failed to provide any reference or other evidence that the steps of "mirror-polishing at least the surface of the fired substrate on which the wiring pattern is formed, and the fired substrate in which the through-hole having the connecting electrode is formed," and "thereafter forming the wiring pattern on the mirror-polished surface by the lift-off method" are well-known, and certainly failed to provide any reference or other evidence which teaches or suggests it would have been obvious to perform these steps in the method of AAPA. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 1276, 1278 (Fed. Cir. 1987).

AAPA Fig. 8 clearly and specifically teaches a filling electrode 60 which is convex or concave with respect to the surface of the substrate 51 and which is **NOT** polished. Thus, AAPA certainly fails to teach or suggest the steps of "mirror-polishing at least the surface of the fired substrate on which the wiring pattern is formed, and the fired substrate in which the through-hole having the connecting electrode is formed" and "thereafter forming the wiring pattern on the mirror-polished surface by the lift-off method" as recited in the present claimed invention. In fact, AAPA clearly teaches away from mirror-polishing the surface of a fired substrate as recited in the present claimed invention, because the Background of the Invention of the present application specifically discloses that the surface of the substrate is **NOT** mirror-polished.

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Accordingly, AAPA cannot be relied upon in an obviousness rejection of Applicants' claimed invention since it is error to find obviousness where references diverge and teach away from the invention at hand. W.L. Gore & Assoc. v. Garlock Inc., 721 F .2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983).

The PTO has the burden under 35 U.S.C. §103 to establish a *prima facie* case of obviousness. See In re Piasecki, 745 F .2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). The PTO can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. See In re Fine, 837 F .2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1984). This it has not done. The Examiner failed to cite prior art that remedies the deficiencies of AAPA and Sano or that suggests the obviousness of modifying AAPA and Sano to achieve Applicant's claimed invention.

Instead, the Examiner improperly relied upon hindsight reconstruction of the claimed invention in reaching his obviousness determination. To imbue one of ordinary skill in the art with knowledge of the invention, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. W.L. Gore & Assoc. v. Garlock, Inc., 721 F .2d 1540, 1543, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Prior art rejections must be based on evidence. Graham v. John Deere Co., 383 U.S. 117 (1966). Pursuant to MPEP 706.02(a), the Examiner is hereby requested to cite a reference in support of his position that it was well known at the time of Applicants' invention to mirror-polish at least the surface of the fired substrate on which the wiring pattern is formed, and -the fired substrate in which the through-hole having the connecting electrode is formed and thereafter form the wiring pattern on the mirror-polished surface by the lift-off method. If the rejection is based on facts within the personal knowledge of the Examiner, the data should be supported as sp cifically as possible and the rejection must be supported by an affidavit from the Examiner, which would be subject to contradiction or explanation by affidavit of Applicants or other

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persons. See 37 C.F.R. §1.104(d)(2).

At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at Applicant's invention because he had the necessary skills to carry out the requisite process steps. This is an inappropriate standard for obviousness. That which is within the capabilities of one skilled in the art is not synonymous with obviousness. See Ex Parte Levengood, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 221 USPQ 1125 (Fed. Cir. 1984). As noted above, the prior art clearly teaches away from the combination proposed by the Examiner, instead of suggesting the combination.

Accordingly, Applicants respectfully submit that AAPA and Sano, applied alone or in combination, fail to teach or suggest the unique combination of features and method steps recited in claims 5 and 10 of the present invention.

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 5 and 10 are allowable. Claims 2-4, 6-8 and 12 depend upon claims 5 and 10, and are therefore allowable for at least the reasons that claims 5 and 10 are allowable.

In view of the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,


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